

SpyFly

Digital insect trap

Product Codes for Ordering:

YN-0001-KQ-D

**Description:**

SpyFly is a remote monitoring system for crop pest infestations. It uses chromotropic lures, pheromones, and/or food attractants to attract and capture harmful insects and employs artificial intelligence models to recognize species. If crop pests are identified, the system notifies the farmer.

At regular intervals, SpyFly photographs the glue paper inside and transfers the images to a proprietary cloud platform, enabling the identification of pest species. In addition to the images, SpyFly also collects daily weather and climate parameters such as temperature, humidity, and barometric pressure. These data are useful both for the user and for developing predictive models on the spread of harmful insects, supporting timely and accurate prevention.

All data and images are accessible via a web app for laptops, tablets, or smartphones, dramatically reducing the need for on-site presence. Once the user and device are registered, sites of interest can be monitored in real time and remotely.

SpyFly supports farmers by allowing them to intervene promptly and selectively in the event of an attack, thus allowing them to plan treatments only when truly necessary, reducing costs related to both production losses and interventions.

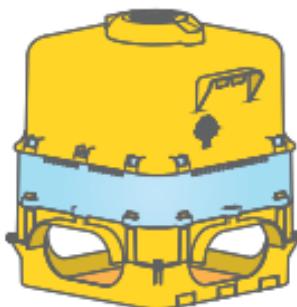
SpyFly is a product of Agrorobotica srl developed in collaboration with Netsens. Agrorobotica and SpyFly are registered trademarks of Agrorobotica srl.

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Applications:

SpyFly can be easily and independently installed in 7 simple steps, on specific crops, using existing mobile network infrastructure. It is suitable for both tree crops (vineyards, apple orchards, olive groves) and high-density plantations.

SpyFly is powered by a solar panel and allows you to monitor the progression of infestations based on detected weather conditions. Furthermore, thanks to GPS tracking, the device can be viewed on a map within the platform.

**Electrical Specifications:**

Power supply: 12.8 VDC
Max consumption: 1.1 A
Autonomy: up to 7 days in absence of solar radiation

Other features:

Radio module type: GSM/DCS(2G), LTE(4G)
Location: GNSS/GPS
Operating band: GSM (880-915 MHz); DCS (1920-1930 MHz); LTE (1920-1980; 1710-1785; 2500-2570; 880-915; 832-862); GNSS (1575.42 MHz)
Standard acquisition interval: 12 hours (With the possibility of increasing cycles on request)
Lighting: LED (Night photography)

Mechanical Features:

Weight: 3.0 kg
Dimensions: 270 x 250 x 310 mm
Degree of protection: IP56

Integrated sensors:

Air temperature
Air humidity
Atomic pressure



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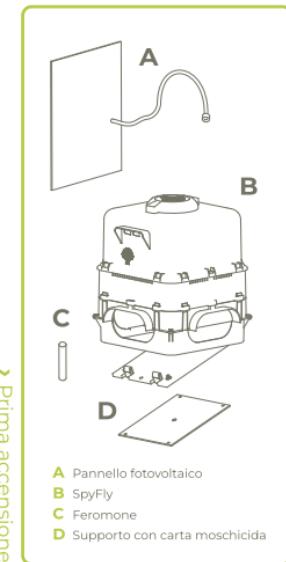


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What's in the kit?

The product comes with the following components:

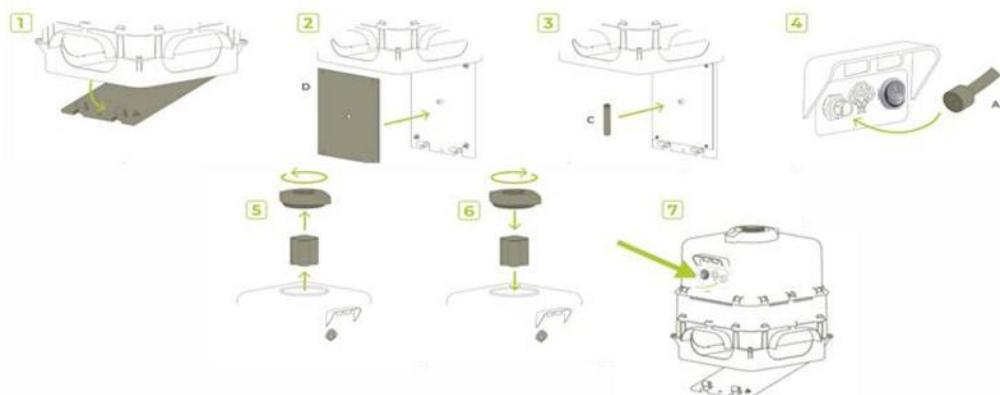
- **Main unit**, containing the control electronics, camera, lighting system, battery compartment, insect catching area, sensors, switch and connectors;
- **Solar panel**;
- **Battery pack**, to be inserted into the appropriate compartment;
- **Glue paper and installation accessorie** .

**SpyFly Installation**

The main unit is positioned according to the instructions in the user manual, so as to facilitate insect capture. The battery is then connected, inserting it into the appropriate compartment, and the solar panel is positioned.

The device is then turned on using the dedicated switch, starting an initial image acquisition and transmission cycle. Subsequent acquisitions and transmissions occur every 12 hours (at 12:00 AM and 12:00 PM local time each day; the number of daily cycles can be increased upon request). The unit is equipped with an LED lighting system that uniforms the captured scene regardless of ambient light conditions and allows for nighttime photography.

The images are transmitted to a platform accessible via a web app, which, in addition to the images, also provides identification data for the species of interest (insect count), additional weather and climate parameters, any warnings, the status of the adhesive paper, and the remaining duration of the pheromone.



Insect recognition and product configuration selection

The operating principle is as follows:

Insects, attracted by the chromotropic and/or pheromonal lure, are captured on the adhesive paper. At configurable intervals, the optical system acquires images of the adhesive surface. The images, along with sensor data, are stored locally and sent to the cloud platform via a cellular network (4G/LTE).

The AI-based analysis software model, running remotely, processes images for automatic insect recognition and integrates environmental data to support the future development of forecasting models. Users access the data via a mobile app or web portal, after authenticating on the Agrorobotica platform .

The insects currently supported are as follows:

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INSECTS RECOGNIZED BY THE MODEL:

Olive fly (Bactrocera oleae)

A key pest for olive growing. The larvae feed on the olive pulp, causing serious damage.

Mediterranean fruit fly (Ceratitis capitata)

It infests numerous fruits (citrus, stone fruit, etc.). It is one of the main quarantine plant diseases.

Olive margarine (Palpita unionalis)

It damages olive and privet trees, feeding on the leaves and shoots.

Grapevine moth (Lobesia botrana)

One of the main pests in viticulture. It attacks grape bunches, also promoting secondary mold.

Tomato moth (Tuta absoluta)

A serious pest of tomatoes and other solanaceous plants. It is highly feared in greenhouses and open fields.

Hydriris ornatalis

hydriris larvae ornatalis feed on the stems and leaves of crops such as rice, wheat and corn, causing damage.

Tracking, packaging and shipping:

Each SpyFly unit is individually tested and assigned a unique serial identification code for traceability. This code can be found on the shipping box, on the box itself, or in the relevant section of the user manual. It is recommended that you keep this code safe and provide it to the technician in the event of a fault or replacement.

Units sold individually come with their own packaging to protect the unit during transport.

If the box appears open or visibly damaged, do not accept delivery from the courier. Do not open the box with knives, cutters, or blades, which could damage the unit or its cable.

General conditions of service and warranty:

Netsens website , available at <https://www.netsens.it/download/condizioni-generali-di-servizio/>

Contact Netsens srl for any further information on the warranty.



Information on the treatment of electrical and electronic waste:


Information for users pursuant to art. 13 of Legislative Decree 25 July 2005, n. 151 "Implementation of Directives 2002/95/EC, 2002/96/EC and 2003/108/EC, relating to the reduction of the use of hazardous substances in electrical and electronic equipment, as well as to the disposal of waste".

The crossed-out wheelie bin symbol on the appliance or its packaging indicates that the product must be disposed of separately from other waste at the end of its useful life. The separate collection of this appliance at the end of its life is organized and managed by the manufacturer. Users wishing to dispose of this appliance must contact the manufacturer and follow the system it has adopted to enable the separate collection of end-of-life appliances.

Appropriate separate waste collection for subsequent recycling, treatment, and environmentally friendly disposal of decommissioned equipment helps avoid negative effects on the environment and health and promotes the reuse and/or recycling of the materials the equipment is composed of.

Illegal disposal of the product by the holder will result in the application of the administrative sanctions provided for by current legislation.

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Revisions:

Date	Version	Page(s)	Changes
09/01/2026	Draft		
15/01/2026	Definitive		

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